

REMARKS:

**Status of claims and amendments**

Claims 1-13 are pending in the application. In the Office Action dated May 3, 2006, the Examiner

1. rejected claims 1-13 under 35 U.S.C. §101 as allegedly being directed to non-statutory subject matter; and
2. rejected claims 1-13 under 35 U.S.C. §103(a) as allegedly being unpatentable over Henry.

These rejections are respectfully traversed.

In this amendment, claims 1-2 have been canceled. Claims 3-7, and 10-11 have been amended for further clarity. No new matter is added.

**1. The 35 U.S.C. §101 rejection**

The Examiner alleged that

[c]laims 1-13 recite abstract ideas or mathematical algorithms that fail to produce a physical transformation or a useful, concrete, and tangible result....There is no physical transformation from the “calculating” recited, nor is there any useful, concrete, or tangible result that is recited.

However, contrary to the Examiner’s assertion, each independent claim does recite a physical transformation and a useful, concrete, and tangible result. Claim 3 originally recited a plurality  $p$  of actuators for generating control force to the suspension system. That control force, as explained in the specification at paragraphs 50-52, is the same  $f(t)$  as recited in claim 3. Thus, the force equation in claim 3 is directly linked to the actuation of the claimed suspension system. In order to further clarify this relationship, claim 3 has been amended to recite: “a plurality  $p$  of actuators for generating control force applied to the suspension system... $f(t)$  comprises the control force applied to the suspension system, denoted as a  $p \times 1$  external force vector.” In addition, each of claims 10 and 11 directly links the actuating step—a physical result—with the calculating of the control force obtained from the recited equation: “actuating the actuators by the calculated actuating force  $f(t)$ .” Both generating a control force  $f(t)$  applied to the suspension system and actuating the actuators are physical transformations each producing the useful, concrete, and tangible result of applying a force to the suspension system. For these reasons, claims 3, 10, and 11 are directed to statutory subject matter. Claims 4-9 and 12-13 depend, either directly or indirectly, from claims 3 and 11. Withdrawal of the §101 rejection is respectfully requested.

## 2. The 35 U.S.C. §103(a) rejection over Henry

This rejection is respectfully traversed. However, it is difficult for applicant to provide specific comments in traversal because the Examiner has not provided any clear rationale or supporting evidence for the alleged obviousness over the single cited reference. In fact, the Examiner explicitly admits that the cited reference does not meet all claim limitations: "Henry does not teach the specific equations recited by the applicant." The Examiner has therefore not established a *prima facie* case of obviousness, as set forth in more detail below.

The invention as recited in independent claims 3, 10 and 11 includes specific limitations not present in the prior art. In particular, control of a suspension—in a system in claim 3 and via the recited methods of claims 10 and 11—is accomplished by, *inter alia*, applying through actuators a specifically generated actuating force. This actuating force is determined in accordance with a unique and specific recited algorithm, an algorithm the Examiner admits is not taught in the prior art.

Also, even though the cited reference discloses a suspension and related equations, it does not disclose the use of the equations in a system or method as recited by the instant claims. For example, Henry does not disclose an equation for calculating an actuating force to be applied to the suspension system based on mass, damping, stiffness and actuator position matrices as recited in the pending claims.

The cited prior art thus does not disclose each and every claim limitation. Moreover, there is no motivation offered by the Examiner as to why a person skilled in the art would use a different, and unidentified, algorithm for system control. Finally, without a clear teaching in the art of the missing claim limitations and without any motivation for making a change in the prior art, there can be no reasonable expectation of success for the supposed modification to the prior art as alleged by the Examiner. As such, none of the requirements for *prima facie* obviousness have been met. See M.P.E.P. 2142.

Factual support or at least a convincing rationale must be provided for a rejection or it cannot be sustained. M.P.E.P. 2144. Here, no rationale is provided at all beyond a bare allegation that it would have been obvious. To the extent the Examiner asserts that the modification to provide the missing limitations is within the common knowledge of a person skilled in the art, the Applicant challenges such assertion as unsupportable and notes that the requirements of M.P.E.P. 2144.03 have not been met.

For these reasons, pending claims 3-13 are patentable over the cited reference and withdrawal of the obviousness rejection is respectfully requested.

## Conclusions

In view of the foregoing, Applicant believes all claims now pending in this application are in condition for allowance. The issuance of a formal Notice of Allowance is respectfully requested.

Authorization is granted to charge any outstanding fees due at this time for the continued prosecution of this matter to Morgan, Lewis & Bockius LLP Deposit Account No. 50-0310 (matter no. 060944-0154).

Respectfully submitted,



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